Amendments to the Claims

1. (Currently Amended) A method of organ augmentation comprising the steps of:

transiently transfecting ~~a first population of~~ cells with a plasmid encoding the angiogenesis modulating agent VEGF;

selecting a first population of cells from the transfected cells, which contain the VEGF encoding plasmid and transiently express the VEGF angiogenesis modulating agent,

selecting a second population of cells, wherein the second population of cells comprises cells of a different cell type than the first population,

suspending the first population of cells and the second population of cells in an injectable polymer matrix;

~~implanting~~ injecting the polymer matrix ~~transiently transfected~~ ~~first population cells~~ into a target tissue region where the first population of cells will express the VEGF angiogenesis modulating agent~~; and~~

~~co-administering a second population of cells, wherein the second population of cells substantially comprises cells of a different cell type than the first population,~~

thereby inducing assimilation and differentiation of at least one of the populations of cells in the target region and augmenting organ function.

2. (Currently Amended) The method of claim 1, wherein the step of transfecting the first population of cells ~~further~~ comprises transiently transfecting the cells[[,]] such that the angiogenesis modulating agent is produced for less than three weeks.

3. (Previously Amended) The method of claim 1, wherein the first population of cells comprises undifferentiated cells.

4. (Previously Amended) The method of claim 1, wherein the first population of cells comprises vascular endothelial cells (EC).

5. (Canceled)

6. (Currently Amended) The method of ~~claim 5~~claim 1, wherein the second population of cells comprises undifferentiated cells.

7. (Currently Amended) The method of ~~claim 5~~claim 1, wherein the second population of cells comprises vascular endothelial cells (EC).

8. (Currently Amended) The method of claim 1, wherein the ~~method further comprises the step of suspending the transfected cells in a pharmaceutically acceptable carrier.~~ polymer matrix comprises collagen.

9. (Currently Amended) The method of claim 8, wherein the ~~pharmaceutically acceptable carrier~~ polymer matrix comprises collagen type I.

10. (Currently Amended) The method of claim 1, wherein the ~~claim 8, wherein the pharmaceutically acceptable carrier comprises a polymer matrix.~~ first population of cells express the VEGF angiogenesis modulating agent for less than about 10 weeks.

11. (Cancelled)

12. (Previously Amended) The method of claim 1, wherein the first population of cells comprises myoblasts.

13. (Canceled)

14. (Withdrawn) A method of promoting tissue formation in a subject comprising the steps of:

isolating cells suitable for growth of an organ construct;

transfecting cells with a plasmid encoding an angiogenesis modulating agent;

seeding the transfecting cells onto a biomatrix;

implanting the biomatrix at a site in need of tissue formation, such that the angiogenesis modulating agent producing cells differentiate into tissue and produce the growth factor;

whereby the transfected cells assist in formation and repair of tissue.

15. (Withdrawn) The method of claim 14, wherein the step of transfecting cells further comprises transient transfection.

16. (Withdrawn) The method of claim 14, wherein the step of transfecting cells further comprises selecting stably transfected cells.

17. (Withdrawn) The method of claim 14, wherein the method further comprises screening transfected cells for expression of an appropriate isolate, such that the angiogenesis modulating agent is being produced in high yield.

18. (Withdrawn) The method of claim 14, wherein the step of isolating cells further comprises the steps of isolating cells from a subject and culturing the cells *in vitro*.

19. (Withdrawn) The method of claim 14, wherein the method further comprises producing the angiogenesis modulating agent *in vivo* for less than three weeks.

20. (Withdrawn) The method of claim 14, wherein the cells comprise myoblasts.

21. (Withdrawn) The method of claim 14, wherein the angiogenesis modulating agent is VEGF.

22. (Withdrawn) The method of claim 14, wherein the tissue is muscle tissue.

23. (Currently Amended) A method for augmenting organ function comprising:

culturing at least a first population of cells on a matrix material to produce an organ construct; ~~capable of differentiating *in vivo* to replace or augment organ function;~~

transiently transfecting a second population of cells with a plasmid encoding an angiogenesis modulating agent, wherein the second population of cells ~~substantially~~ comprises cells of a different cell type than the first population, wherein either the first or second population of cells comprises myoblasts; and

implanting the organ construct and the transfected cells *in vivo* at one target site to replace or augment organ function, such that the transfected cells express the angiogenesis modulating agent for less than about 3 weeks.

24. (Original) The method of claim 23, wherein the matrix is decellularized tissue.

25. (Original) The method of claim 23, wherein the matrix is a hydrogel.

26. (Original) The method of claim 23, wherein the matrix is a polymer.

27. (Canceled)

28. (Original) The method of claim 23, wherein the angiogenesis modulating agent is VEGF.

29. (Previously Presented) The method of claim 23, wherein the method further comprises assimilating the transfected cells into a tissue layer.

30. (Withdrawn) A method of tissue repair comprising the steps of:

transfecting a population of cells with a plasmid encoding an angiogenesis modulating agent;

encapsulating the transfected cells; and

implanting the suspended transfected cells into a target tissue region wherein the cells will express the angiogenesis modulating agent thereby enhancing angiogenesis in the target tissue.

31. (Withdrawn) The method of claim 30, wherein the step of encapsulating the transfected cells further comprises using alginate-PLL capsules.

32. (Withdrawn) The method of claim 30, wherein the method further comprises co-implanting a three dimensional biomatrix of cultured cells at the target site, such that a tissue layer of the three dimensional biomatrix differentiates to provide a new tissue.

33. (Previously Presented) The method of claim 23, wherein the organ construct and the transfected cells are each implanted *in vivo* at a plurality of target sites.